

# Developmental Education Challenges and Strategies for Reform



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## IN THIS ISSUE

Each year, millions of students pursue a college degree or credential seeking to move one step closer to achieving the American Dream. However, many of these students are deemed unprepared or underprepared for college-level coursework and placed into developmental or remedial education. Among all first-year undergraduates in the United States for the 2011-12 academic year, about one-third reported they enrolled in at least one developmental course, and among community college students, this proportion is higher (approximately 40 percent).<sup>1</sup> For these students, developmental education may offer both an opportunity for academic enrichment and a barrier to college completion. This brief illustrates the prevalence and substantial costs of developmental education in our higher education system and outlines evidence-based reform strategies that policymakers, states, and institutions may consider to improve strategies for remedial students' completion.<sup>2</sup> Strategies with preliminary supporting evidence for improving the outcomes of students in developmental education and reducing their costs include 1) using multiple measures to assess postsecondary readiness and place students; 2) compressing or mainstreaming developmental education with course redesign, such as offering co-requisite college-level courses; and 3) implementing comprehensive, integrated, and long-lasting support programs.

# Background

In the past 50 years, the U.S. has made dramatic strides in opening up college opportunities to students from all backgrounds, particularly with the growth in enrollment at community colleges and other open-access institutions. With this growth in educational opportunity came an influx of students, not all of whom were able to meet the academic rigor of a college level education. Developmental education emerged as an educational strategy for assisting students who were perceived as underprepared for the academic rigor of college-level coursework (see infographic on the next page). Institutions created sub-baccalaureate reading, writing, and math course sequences, often with multiple levels of instruction in each subject area. Some students were left to take one or two developmental courses, while others had to take a larger number of courses to pass multiple levels of coursework in order to progress to college-level classes.<sup>3</sup> In many cases, students were placed into these courses based on a single assessment. Although these policies and practices were referred to by terms as varied as “developmental education,” “remedial education,” and “college-readiness courses,” they all consisted of strategies to help underprepared students acquire the skills and knowledge needed to move into college-level courses.<sup>4</sup> (In this brief, the terms “developmental education” or “developmental courses” and “remediation” are used interchangeably.)

While some would argue that developmental education still serves its original purpose, a recent call among policymakers and educators for higher college completion rates and improved curricula has led to a reexamination of developmental education by states, institutions, and policymakers.<sup>5,6</sup> Longitudinal tracking of student progression through developmental courses has drawn attention to low course and degree completion rates, particularly in math courses.<sup>7,8</sup> In addition, institutions’ use of a single, high-stakes test to assess readiness has come under criticism. Many stakeholders have pushed for changes in colleges’ practices with respect to placement in developmental courses, including using multiple measures for assessment and placement.<sup>9</sup> Other reforms to developmental education have included (but are not limited to)

- comprehensive and integrated support programs;
- contextualized instruction (e.g., aligning content with the student’s major or program of study);
- early assessment programs for at-risk high school students and accelerated academic programs to help prepare high school students for the rigors of college-level course work;
- enhanced and early-alert advising;
- performance-based monetary incentives for students;
- practices to accelerate, compress, or mainstream developmental education;
- practices to modify information used to make placement decisions; and
- practices to teach metacognition, productive persistence, and college success skills.<sup>10</sup>

## The traditional developmental education sequence

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01



### Preparation

Past experiences, most notably in high school and GED programs, shape how prepared students are for college.

02



### Assessment

Students take a brief standardized exam to measure their college readiness in core subject areas.

03



### Placement

Assessment results determine placement into developmental education, typically developmental English, math, writing, or some combination of all three.

04



### Remediation

Course content improves grasp of foundational concepts and skills for college coursework.

05



### College-Ready

Completion of developmental coursework demonstrates the student is college-ready.

06



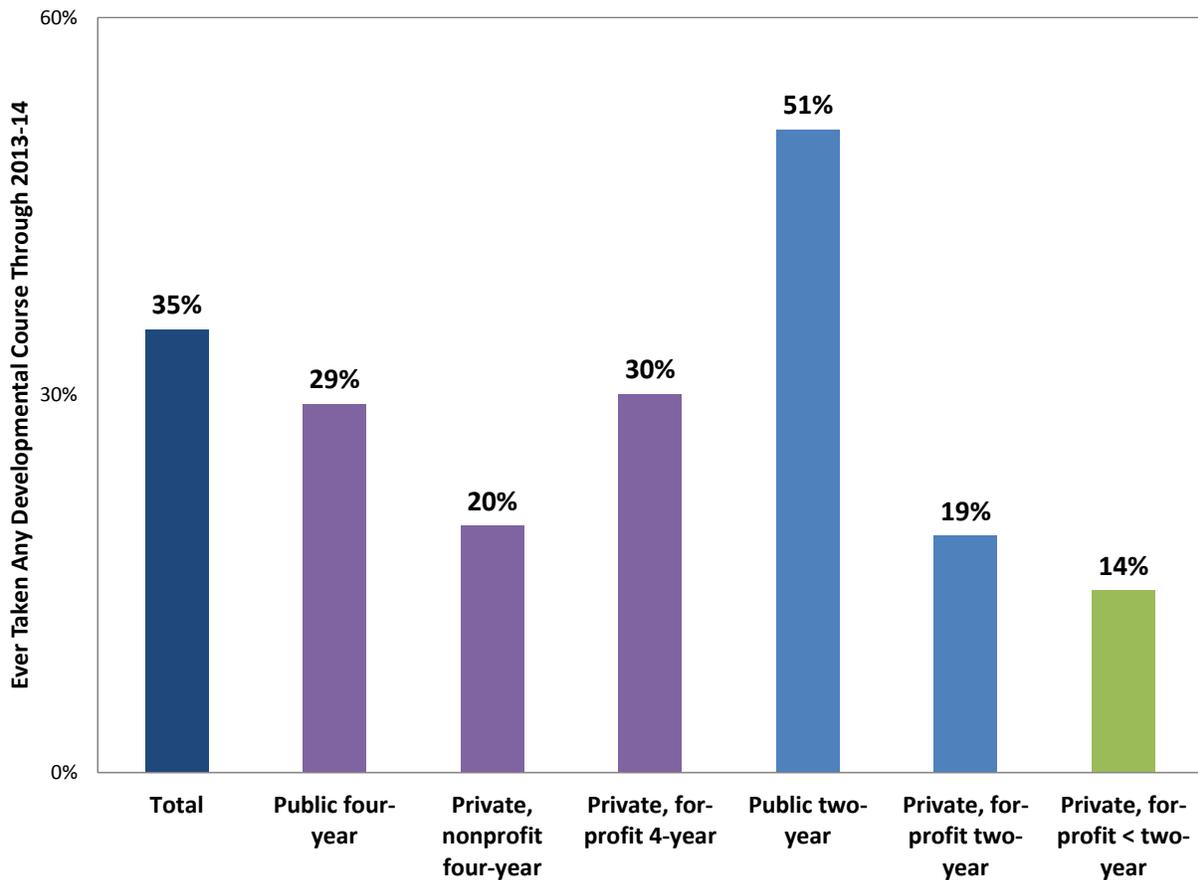
### College Credit

Students take college credit and ultimately complete the requirements for a postsecondary degree.

## Enrollment in Developmental Coursework

Estimates of the prevalence of college remediation vary due to incomplete data and inconsistent definitions of what constitutes developmental coursework across states, college systems, and institutions. Among students who entered their first institution in 2010-11, about 35 percent of beginning postsecondary students took at least one developmental course during the following four years. Moreover, while remedial education is often perceived as predominantly an issue in two-year institutions, remediation was common across all sectors and levels of higher education (see Exhibit 1). Note that for-profit institutions that predominantly award sub-baccalaureate degrees tend to place fewer students in developmental education in part because these institutions focus more on career and vocational programs that may not require as much preparation in foundational topics.

Exhibit 1: Developmental Course-Taking Among 2010-11 Beginning Postsecondary Students, by Sector of Institution from 2010 through 2014



NOTE: Figures reflect percentage students who took developmental courses within three years of enrolling at their first institution.

Students attending less than four-year private, nonprofit institutions included in total estimate but not disaggregated by sector due to small n-size. Sector defined as the student's first institution.

SOURCE: U.S. Department of Education, National Center for Education Statistics, 2010-11 Beginning Postsecondary Students Longitudinal Study, Second Follow-up (BPS:10/14). To recreate the estimates above in PowerStats (<https://nces.ed.gov/datalab>), use the QuickRetrieve code: cnbg6a.

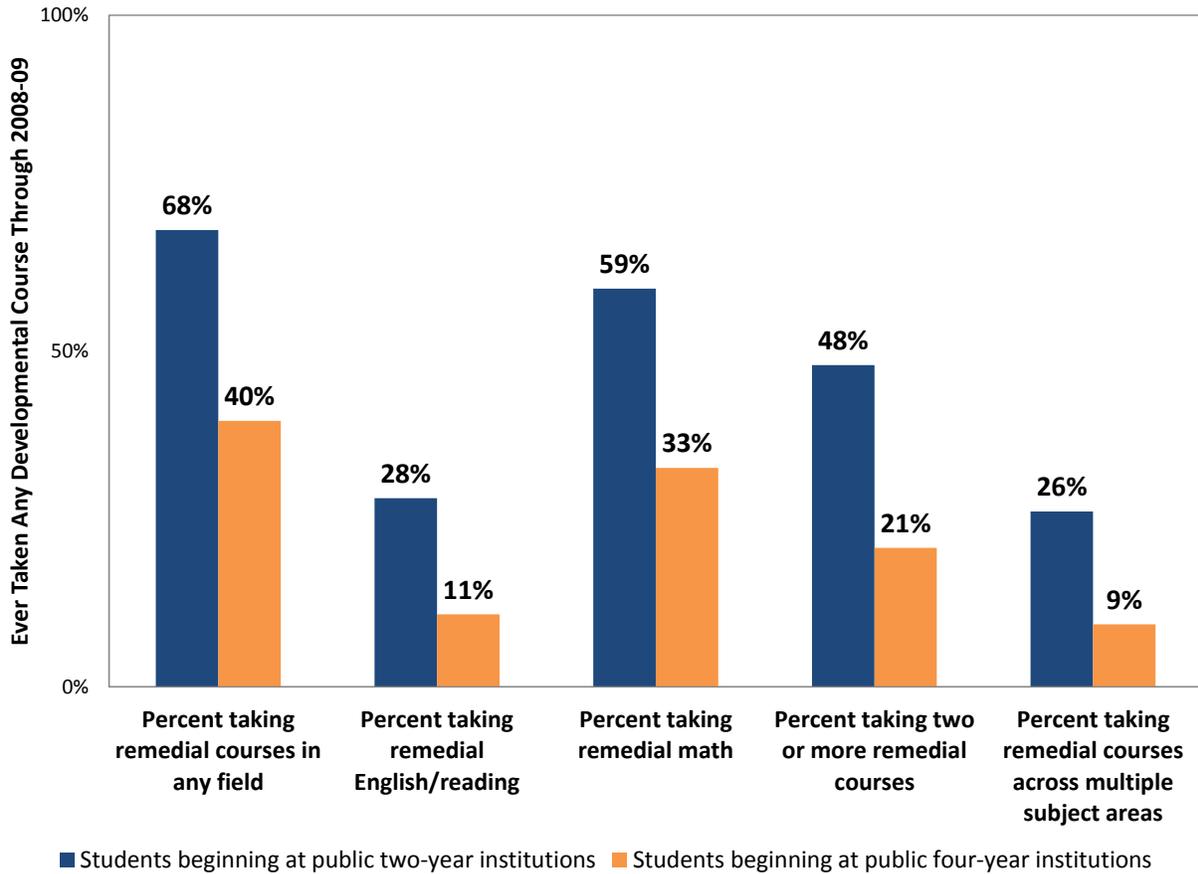
Remediation is also highly concentrated among students with limited academic preparation. Among those beginning school at public two-year institutions in academic year 2003-04, 75 percent of students who were less prepared (i.e., with lower GPAs, lower level and fewer years of math coursework, and/or low ACT/SAT scores) took developmental courses during their college years, compared with 48 percent of strongly prepared students.<sup>11</sup> Among those beginning at public four-year institutions, the remediation rate for less prepared students was more than four times that of strongly prepared students (77 percent, compared with 18 percent).<sup>12</sup>

Participation in developmental education is also more common among several demographic groups, including black and Hispanic students and students from low-income backgrounds.<sup>13,14</sup> At public four-year institutions, first-generation students are particularly likely to enroll in developmental education courses.<sup>15,16</sup> Among all beginning postsecondary students, an estimated 58 percent of Hispanic students, 57 percent of black students, 39 percent of Pell grant recipients, and 40 percent of first-generation college students enrolled in a developmental course between 2010 and 2014.<sup>17</sup> Still, despite differences between particular groups of students, developmental education overall is widespread, affecting both disadvantaged and advantaged populations.<sup>18,19</sup> Thirty percent of white students, over 34 percent of Asian students, 31 percent of non-Pell students, and 27 percent of students who have at least one parent who attained a bachelor's degree took a developmental course among students who entered postsecondary education in 2010-11.<sup>20</sup>

Some research suggests that large enrollments in developmental education may reflect misalignment between high school and college academic standards—in addition to varying policies on developmental education and placement across states and institutions.<sup>21,22,23</sup> In recent years, the educational achievement of American high school students has started to lag behind international peers. On the Programme for International Student Assessment (PISA), a test given every three years to 15-year-olds in dozens of leading nations, American students essentially stagnated in 2012, while students in many other countries moved ahead. In the three years since 2009, the U.S.'s international ranking in math fell from 25th to 27th. In science, it slipped from 17th to 20th. And in reading, it dropped from 14th to 17th.<sup>24,25</sup> National Assessment of Educational Progress (NAEP) scores on math and reading have also stagnated in recent years among 12th-grade high school students.<sup>26</sup>

Traditionally, developmental courses focus on English (e.g., reading comprehension), writing skills, or math.<sup>27</sup> Exhibit 2 shows that 59 percent of beginning postsecondary students at public two-year colleges enrolled in math developmental courses and 28 percent enrolled in English-related developmental courses within six years of entering college (from 2003-04 to 2008-09). At four-year institutions, 11 percent and 33 percent took math and English courses, respectively. Although research on developmental education course-taking at private institutions is more limited, data suggest developmental math is somewhat less common relative to English, reading, and writing at private institutions, at least during the student's first year of study.<sup>28</sup>

**Exhibit 2: Developmental Course-taking Among 2003-04 Beginning Postsecondary Students at Public Institutions, by Subject Matter from 2003 through 2009**



NOTE: Figures reflect percentage students who took developmental courses within six years of enrolling at their first institution. Only includes students who first enrolled in four-year or two-year public institutions.

SOURCE: <http://nces.ed.gov/pubs2016/2016405.pdf>

## Placement in Developmental Education

There is no standard definition for developmental education, or common set of criteria for placing students into these courses. Hence, it is difficult to compare developmental course-taking rates across states, university systems, and institutions. For instance, a report from the Center for American Progress estimated that remediation rates range from only 2 percent in Montana to 93 percent in Florida, based on available data. Most states have remediation rates between 30 and 55

percent, meaning that anywhere from a third to half of students in most states require developmental coursework.<sup>29</sup>

In many cases, placement into developmental education is determined based on a single factor, such as a brief, high-stakes standardized exam; this can be problematic because research suggests such exams on their own do not reliably place students into the appropriate level of course-taking.<sup>30</sup> However, in other states and institutions, a more holistic approach is taken. For instance, Ivy Tech Community College in Indiana has adopted a system called Multiple Measures for Placement, in which the school assesses students' college readiness using a combination of measures (including grade point average and high school course-taking) to determine college readiness and, if necessary, the need for placement assessments. Students not meeting the high school GPA and transcript requirements for college-level placement still may not need to take placement assessments if they have sufficiently high SAT or ACT scores. Only students who satisfy neither the combination of high school transcript/GPA requirements *nor* the SAT/ACT thresholds are required to take state placement exams that could lead to placement into developmental education.<sup>31</sup>

Given the range of ways in which institutions determine the requirement for developmental education, students with similar academic preparation may have their remedial needs diagnosed very inconsistently across schools. Apart from the inconsistency of approaches to placement used across the country, incorrect placement may mean some students are inappropriately burdened with added costs and coursework, giving them a lower chance for completion; meanwhile, others who could benefit from developmental education are not assigned to such courses.

## **Course and Degree Completion**

Research indicates traditional developmental course-taking can increase students' time to degree attainment and decrease their likelihood of completion.<sup>32</sup> This finding is not surprising since developmental education courses are generally considered pre-collegiate and do not count toward a degree. One analysis of first-time, full-time bachelor's degree-seeking students who take a developmental education course in the first year after high school graduation finds that they are 74 percent more likely to drop out of college than first-time full-time non-developmental students.<sup>33</sup> And fewer than one out of 10 students who take developmental classes complete their degree on time.<sup>34</sup>

The association between developmental course-taking and lower likelihood of completion may be due in part to low rates of success in finishing these developmental courses. For example, among beginning postsecondary students who entered public two-year institutions in 2003-04, half failed to complete all developmental education courses in which they were placed within six years; and at public four-year colleges, nearly 40 percent did not.<sup>35</sup> Degree completion outcomes are much worse among students who do not complete any or all developmental courses.

Exhibit 3 shows six-year degree persistence and attainment rates among beginning students in academic year 2003-04 at public institutions, disaggregated by developmental course completion status and institution type. At both two-year and four-year public institutions, students who do not

complete all courses in order to progress to college work are less likely to attain a postsecondary degree (even if they transfer to another institution) than both those who do complete their developmental courses and non-developmental students. Although these data do not account for differences in preparation and other characteristics between developmental completers, non-completers, and non-developmental students, it does suggest appropriate placement and completion of developmental courses could relate to persistence and degree completion.

Exhibit 3: Six-Year Persistence and Degree Attainment Among 2003–04 Beginning Postsecondary Students Who First Enrolled in Public Four-Year and Two-Year Institutions, by Developmental Course Enrollment, and Course Completion Status

Institution Type and Developmental Coursetaking	Degree Attainment Status			
	No degree and not enrolled	Not degree but still enrolled	Attained an associate degree at any institution	Attained a bachelor's degree at any institution
<b>Two-year public</b>				
No developmental courses required	47%	14%	24%	15%
Completed all developmental courses	35%	22%	26%	17%
Completed some developmental courses	47%	27%	22%	4%
Completed no developmental courses	67%	18%	12%	4%
<b>Four-year public</b>				
No developmental courses required	19%	10%	4%	67%
Completed all developmental courses	22%	16%	7%	55%
Completed some developmental courses	34%	24%	9%	33%
Completed no developmental courses	44%	17%	9%	30%

NOTE: Figures include students who took developmental courses within six years of enrolling at their first institution. Only includes students who first enrolled in four-year or two-year public institutions.

SOURCE: <http://nces.ed.gov/pubs2016/2016405.pdf>

## **The Costs of Developmental Education and Non-Completion**

Available data suggest the costs of remediation and non-completion could be staggering. According to estimates produced by New America (based on Complete College America and U.S. Department of Education data for 2013-14, in most cases), students and families paid approximately \$1.3 billion in annual out-of-pocket costs for remediation in all 50 states and the District of Columbia.<sup>36</sup> These costs were wide-ranging across states, from \$1 million in less populous states like Alaska to \$205 million in California.<sup>37</sup> Nationally, students at two-year colleges collectively paid \$920 million in out-of-pocket costs for remediation. And the problem was not limited to community and career colleges, where students are often perceived as less prepared for advanced coursework; students at four-year public universities categorized as very high research institutions according the Carnegie Classifications<sup>38</sup> paid \$33 million annually, while students at other four-year public institutions paid around \$333 million.<sup>39</sup>

## Students are paying out-of-pocket to cover developmental education

**\$1.3 billion**  
PAID OUT-OF-POCKET  
NATIONALLY



**\$920 million**  
AT TWO-YEAR COLLEGES

in 2013-14

Source: Center for American Progress

## Loan debt burdens developmental education students



**2 out of 5**  
TAKE ON DEBT TO PAY  
FOR REMEDIATION



**~\$380 million**  
BORROWED EVERY YEAR TO  
COVER REMEDIATION



**~\$3,000**  
BORROWED PER REMEDIAL  
COURSE ON AVERAGE

Source: National Center for Education Statistics / Center for American Progress / Education Reform Now

In addition to the personal costs to students and families, much of developmental education is financed by student debt and federal taxpayers. While developmental education is most common at low-cost community colleges where borrowing is less common, over two out of five students who ever take a developmental course accumulate at least one dollar of federal student loan debt—and over two-thirds of remedial students at private nonprofit and for-profit institutions borrow federal loans.<sup>40</sup> Typically, these students borrow upwards of \$10,000 in loans each year.<sup>41</sup> Based on these trends, one analysis by Education Reform Now estimates students borrow close to \$3,000 per

developmental course and accumulate as much as \$380 million in federal student loan debt each year across the country.<sup>42</sup>

The implications of these costs can be particularly troubling for students in developmental education who do not complete these courses and drop out. Data indicate a clear link between college completion and successful loan repayment.<sup>43,44</sup> In fact, U.S. Department of Education data and related studies show undergraduates who take out college loans but don't graduate are three times more likely to default than borrowers who complete.<sup>45</sup> This means, for many students who require developmental education and who drop out of school without a degree, repayment of college debt can be a difficult burden to bear compared with developmental students who successfully progress to college coursework and non-developmental students.

## Strategies for Reform

Below are promising strategies for reforming developmental education in order to improve course completion, student achievement (e.g., GPA), credit accumulation, persistence, and college completion. This summary draws heavily from the first What Works Clearinghouse Educator's Practice Guide—Strategies for Postsecondary Students in Developmental Education—A Practice Guide for College and University Administrators, Advisors, and Faculty—released by the Institute of Education Sciences on Nov. 29, 2016.<sup>46</sup> The new practice guide includes six evidence-based recommendations to improve the postsecondary success of students who may be academically underprepared for college and was developed by a panel of research and practice experts from Teachers College, Miami Dade College, Vanderbilt University, MDRC, and the Southern Regional Education Board. Though not a comprehensive overview of all reforms in this space, the strategies noted below have been carried out by institutional leaders and meet at least a minimal level of evidence according experts in the field. The Center for the Analysis of Postsecondary Readiness, a joint enterprise between MDRC and the Community College Research Center that is funded by a grant from the Department of Education's Institute of Education Sciences, will be conducting further research into some of these strategies.

### Using Multiple Measures to Assess Postsecondary Readiness and Place Students

Most open-access institutions require incoming students to take brief standardized assessments in math, reading, and writing, which are used to place students into either developmental or college coursework. However, there is growing awareness that a single placement test may not provide a perfect measure of college readiness or predict success in a college-level class. One way to improve measurement and yield more appropriate placement for students may be to assess readiness multiple ways—such as high school GPA, the number of years since high school graduation or equivalent, the number of courses taken in the subject (e.g., English or math), and the highest level taken in the subject (e.g., Algebra II for math).<sup>47</sup>

One study, employing a predictive placement algorithm, found that combining test scores, high school achievement, and proxies for student motivation (e.g., taking advanced courses) could reduce misplacement and lower remediation rates by 8 percentage points in math and 12 percentage points in English, while maintaining or improving completion rates.<sup>48</sup> Research suggests systems and colleges should adopt pre-test preparation to improve students' recall of subjects they have already been taught; retest students more often, because results from multiple tests are more reliable and can capture changes in college readiness; and exempt students whose college readiness is evidenced by their high school GPA or ACT/SAT scores.<sup>49</sup> There is growing evidence that high school GPA is a superior indicator of preparation for college: Several studies have found the consideration of high school transcripts reduces how often students are erroneously placed into developmental education.<sup>50</sup>

## **Early Assessment Programs and Collaboration With Local High Schools**

Another way of providing more appropriate placement for students is for postsecondary institutions to work with high schools and communities to assess at-risk students before they enter postsecondary education. Institutions can engage students in early assessment and implement college-readiness interventions, so that they do not need developmental education courses in the first place. Several states have initiated programs to assess students during their junior year of high school and offer courses for underprepared students during their senior year.<sup>51,52</sup> These programs involve measuring high school students' readiness for college-level coursework, which can inform students and their families about the need for skill building in math, reading, or writing, and help them avoid formal placement in developmental education.<sup>53,54</sup>

While there are few studies of these relatively new programs, experts believe that these early assessment and college-readiness interventions show promise, especially when implemented statewide.<sup>55</sup> An early assessment initiative between California Community Colleges and the California State University system, along with state-wide efforts in Kentucky, Tennessee, and Florida, will provide opportunities for researchers to evaluate to what extent these programs help students accelerate towards taking college-level courses after high school.

## **Compressing or Mainstreaming Developmental Education With Course Redesign**

A significant roadblock to remedial course completion is the structure of the coursework itself. Often, a course must be taken over the duration of an entire semester, putting students behind on the first day of enrollment. The impact is compounded over time with multiple courses. As a result, many colleges have adopted an accelerated developmental coursework sequence in which students can more quickly complete developmental education courses. These reforms are often referred to interchangeably in the literature as “intensive,” “compressed,” “condensed,” or “time-shortened” models. Research suggests that if students can register for more than one sequential course in a semester, they are more likely to enroll in the second course, thereby improving retention.<sup>56</sup> Acceleration may also promote persistence and academic success because

the reduced time in developmental education reduces the opportunity for external factors, such as work or family responsibilities, to hinder students' success.<sup>57</sup> Furthermore, this approach may also increase in efficacy when institutions ensure that students enroll in corresponding college-level courses as soon as they finish their developmental counterparts. This sequencing of courses will help limit course avoidance and other barriers to college completion.

Research indicates that acceleration strategies are especially effective when coupled with supports targeting students' academic and motivational needs; professional development for faculty; and rigorous content that reflects college-level expectations.<sup>58</sup> For instance, Hodgar and Jaggars' 2014 study at CUNY found positive effects on credit accumulation for students in a compressed, accelerated writing course.<sup>59</sup>

## **Co-Requisite Pathways to Promote Progress Through Coursework**

Similar to compressing developmental education, co-requisite remediation refers to "mainstream" college-level coursework that integrates additional support for students, usually in the form of a developmental academic support class. Students typically take the supplemental academic course concurrently with regular coursework. This coursework can also be targeted towards specific and relevant content areas, rather than retaking an entire course.

Research indicates accelerated courses that mainstream developmental education students into college-level work with contextualization or supplemental instruction may help students achieve the goals and outcomes of the college-level course assignments.<sup>60</sup> As demonstrated by several programs from Texas to Maryland, these supplemental classes serve to bolster students' understanding of foundational math and English concepts, allow students the opportunity to revisit challenges encountered in the college-level course, and connect students to more prepared peers who can model successful learning strategies.<sup>61</sup>

In 2015, Tennessee implemented co-requisite remediation. Pass rates in introductory college-level math subsequently increased from 12 percent under the prerequisite model to 51 percent, while pass rates in introductory college-level writing increased from 31 percent to 59 percent.<sup>62</sup> While these reforms were introduced alongside other systematic changes, early findings from one study suggest that co-requisite remediation helped reduce the cost of getting a student through his or her first college-level math course by half, from \$7,720 to \$3,840.<sup>63</sup> A more modest reduction was seen in developmental writing courses, where the cost per student fell by 11 percent, from \$3,750 to \$3,350.<sup>64</sup> The model is catching on: According to Complete College America, 21 states are either implementing or planning to introduce co-requisite remediation.<sup>65</sup> Descriptive analyses of co-requisite reforms in West Virginia, Georgia, Tennessee, Indiana, and Colorado are also promising, showing higher pass rates across math and English college-level courses.<sup>66</sup>

## **Implementing Comprehensive, Integrated, and Long-Lasting Support Programs**

Some institutions have implemented comprehensive and integrated support programs that incorporate a variety of components with the goal of improving student educational outcomes. While many colleges offer multiple supports to their students, what differentiates this practice from business as usual is the intentional focus on integrating these supports and incenting participation in the long term.<sup>67</sup>

Interventions that devote considerable resources to student supports have demonstrated sizeable positive impacts on graduation rates and transfer-out rates, outcomes that are particularly difficult to achieve at open-access institutions. For example, experimental research found that the City University of New York's comprehensive Accelerated Study in Associate Programs (ASAP) nearly doubled the three-year graduation rate among developmental education students and increased the rate at which these students transfer to four-year colleges.<sup>68</sup> The ASAP model prioritizes student support: In exchange for full-time attendance, the program waives students' tuition and offers a range of academic and financial supports at no extra cost, including block-scheduled classes, advising, career services, transit cards, and textbooks. Within three years, 40 percent of program participants had received a degree, compared with 22 percent of the control group. Additionally, only 17 percent of the control group was enrolled in a four-year school at the study's conclusion in contrast with 25 percent of program participants. The results show that the largest strides in improving outcomes for developmental students often occur at institutions that make full commitments to reforming multiple aspects of developmental education. Such commitment requires support from senior leadership, and in the case of the ASAP, meaningful investments in financial and human resources.<sup>69</sup>

## **Conclusion**

As policymakers, states, and institutions continue to explore ways of improving college completion and student outcomes, a focus on developmental education must be front and center. The data and research outlined in this brief highlight the importance of this focus and are intended to help education stakeholders make the case for reform. Additionally, the strategies outlined are intended to guide these stakeholders in their reform efforts, and offer a sampling of promising practices that can help achieve intended results.

## More Department resources

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STAY INFORMED

This issue brief described the policy landscape of developmental education and summarized promising strategies that have gained momentum in the field. For a more comprehensive review of how to implement evidence-based developmental education strategies, see *Strategies for Postsecondary Students in Developmental Education*, released on Nov. 29, 2016, by the U.S. Department of Education's What Works Clearinghouse, part of the Institute of Education Sciences.<sup>70</sup>

The new practice guide includes six evidence-based recommendations to improve the postsecondary success of students who may be academically underprepared for college.

The guide was developed by a panel of research and practice experts from Teachers College, Miami Dade College, Vanderbilt University, MDRC, and the Southern Regional Education Board. Based on findings from more than 100 studies and the expertise of panelists, the following six key recommendations are at the heart of the guide:

- **Recommendation 1.** Use multiple measures to assess postsecondary readiness and place students.
- **Recommendation 2.** Require or incentivize regular participation in enhanced advising activities.
- **Recommendation 3.** Offer students performance-based monetary incentives.
- **Recommendation 4.** Compress or mainstream developmental education with course redesign.
- **Recommendation 5.** Teach students how to become self-regulated learners.
- **Recommendation 6.** Implement comprehensive, integrated, and long-lasting support programs.

The practice guide offers specific examples and suggestions for implementing the recommendations in colleges and universities. It also highlights obstacles educators could face and identifies suggested approaches to address them.

### What is the WWC?

The What Works Clearinghouse was established in 2002 to provide educators with the information they need to make evidence-based decisions on how to improve student outcomes. A part of the Institute of Education Sciences, the WWC strives to be a central and trusted source of scientific evidence on education programs, products, practices, and policies.

## **Remedies for Remediation: U.S. Department of Education Convening Readout**

On December 9, 2016, the U.S. Department of Education held a convening entitled “Remedies for Remediation: Strategies and Resources for Successful Reform.” The convening brought together educational stakeholders (institutions and systems of higher education, students, researchers, state agencies, foundations, and advocacy groups) from across the country to address the challenges of developmental education and to identify opportunities and resources for reform. As part of the convening, participants discussed the strategies included in this issue brief, *Developmental Education: Challenges and Strategies for Reform*. In addition, participants made suggestions for ways to reform developmental education based on their experiences in the field. Below are some of the participants’ recommendations.

### **Recommendations:**

- Help students avoid or minimize time spent in developmental education, but do not eliminate it for students who need it
- Improve placement and remediation policies
- Provide various instructional formats for developmental course work (face-to-face, hybrid, and online, etc.)
- Devise supports and strategies to address noncognitive factors (e.g., social belonging) associated with placement into developmental education
- Consider nontraditional students, vulnerable populations, and their educational needs in developmental education, including nonnative speaking populations
- Increase institutions’ understanding of students with disabilities in developmental education in community colleges
- Ensure that students receive adequate counseling by offering an academic advising model that assigns advisors who have program-specific knowledge
- Improve data systems and make them more connected between the different levels (federal, state, and institutional) and provide professional development on how to use data to inform decisions
- Create better alignment between P-12 and higher education systems to increase college readiness, and utilize dual enrollment in early college/high school strategies to reduce the need for developmental education
- Emphasize the role developmental education plays in college completion
- Align developmental education course curricula with college-level course requirements, workforce expectations, and licensure requirements
- Concentrate on faculty development to increase culture competencies and to ensure developmental education students receive effective instruction
- Provide federal, state, foundation, and other sources of grant funding for innovative developmental education programs, and provide incentives for universities to experiment and share findings with stakeholders
- Highlight, improve, and fund co-curricular activities such as clubs that make students feel involved in the community surrounding them
- Bring all levels (federal, state, local) to the table for continued improvement of developmental programming and encourage stakeholders to have more policy-related discussions that connect strategies with federal and state policy

## ENDNOTES

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<sup>1</sup> U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (2014). *Percentage of first-year undergraduate students who reported taking remedial education courses, by selected student and institution characteristics: 2003-04, 2007-08, and 2011-12* [Data file]. Available at [https://nces.ed.gov/programs/digest/d15/tables/dt15\\_311.40.asp](https://nces.ed.gov/programs/digest/d15/tables/dt15_311.40.asp).

<sup>2</sup> Though many of the effective strategies may share common features, each has been identified by the Department's What Works Clearinghouse as a stand-alone intervention or model that is may be promising for improving students' educational outcomes.

<sup>3</sup> Center for Community College Student Engagement (2016). *Expectations meet reality: The underprepared student and community colleges*. Austin, TX: The University of Texas at Austin, College of Education, Department of Educational Administration, Program in Higher Education Leadership. Available at [http://www.ccsse.org/docs/Underprepared\\_Student.pdf](http://www.ccsse.org/docs/Underprepared_Student.pdf).

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<sup>11</sup> Note: Students' academic preparation is a composite measure derived from three precollege academic indicators: high school grade point average (GPA), highest mathematics course taken in

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high school, and college admission test (ACT or SAT) scores. Source:

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